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(FILE 'HOME' ENTERED AT 14:42:07 ON 27 FEB 2002)

FILE 'REGISTRY' ENTERED AT 14:43:23 ON 27 FEB 2002

L1 1 SEA ABB=ON PLU=ON PHOSPHORIBOSYL PYROPHOSPHATE AMIDOTRANSFERA  
SE/CN  
D

FILE 'HCAPLUS' ENTERED AT 14:44:08 ON 27 FEB 2002

FILE 'REGISTRY' ENTERED AT 14:44:14 ON 27 FEB 2002

L2 SET SMARTSELECT ON  
SEL PLU=ON L1 1- CHEM : 16 TERMS  
SET SMARTSELECT OFF

FILE 'HCAPLUS' ENTERED AT 14:44:16 ON 27 FEB 2002

L3 465 SEA ABB=ON PLU=ON L2  
L4 93866 SEA ABB=ON PLU=ON S ESCHERICHIA COLI OR E# COLI OR PARACOLOBA  
CTRUM COLIFORME  
L5 4235 SEA ABB=ON PLU=ON S PURINE NUCLEOSIDE# OR (NUCLEOSIDES (L)  
PURINE) OR PURINE RIBONUCLEOSIDE#  
L6 1 SEA ABB=ON PLU=ON L3 (L) L4 (L) L5  
D IBIB AB HIT  
L7 96 SEA ABB=ON PLU=ON L4 (L) L5  
L8 81 SEA ABB=ON PLU=ON L7 AND PD<19970718  
L9 15 SEA ABB=ON PLU=ON L8 AND PREP/RL  
D IBIB AB 1  
E FERMENTATION/CT  
E E3+ALL  
L10 1 SEA ABB=ON PLU=ON L9 AND FERMENT?  
D IBIB AB HIT  
L\*\*\* DEL 0 S L8 AND FERMET?  
L11 2 SEA ABB=ON PLU=ON L8 AND FERMENT?

> d ibib ab hit

L6 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:256978 HCAPLUS

DOCUMENT NUMBER: 135:32777

TITLE: Investigation of various genotype characteristics for inosine accumulation in *Escherichia coli* W3110

AUTHOR(S): Matsui, Hiroshi; Kawasaki, Hisashi; Shimaoka, Megumi; Kurahashi, Osamu

CORPORATE SOURCE: Fermentation & Biotechnology Laboratories, Ajinomoto Co., Inc., Kanagawa, 210-8681, Japan

SOURCE: Biosci., Biotechnol., Biochem. (2001), 65(3), 570-578  
CODEN: BBBIEJ; ISSN: 0916-8451

PUBLISHER: Japan Society for Bioscience, Biotechnology, and Agrochemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB For the derivation of an inosine-overproducing strain from the wild type microorganism, it is known that the addn. of an adenine requirement, removal of **purine** nucleoside hydrolyzing activity, removal of the feedback inhibition, and repression of key enzymes in the **purine** nucleotides biosynthetic pathway are essential. Thus, the disruption of *purA* (adenine requirement), *deoD* (removal of **purine nucleosides** phosphorylase activity), *purR* (derepression of the regulation of **purine** nucleotides biosynthetic pathway), and the insensitivity of the feedback inhibition of phosphoribosylpyrophosphate (PRPP) **amidotransferase** by AMP and GMP were done in the *E. coli* strain W3110, and then inosine productivity was estd. In the case of using a plasmid harboring the **PRPP amidotransferase** gene (*purF*) that encoded a desensitized **PRPP amidotransferase**, *purF* disrupted mutants were used as the host strains. The innovation of the 4 genotypes brought about a small amt. of inosine accumulation. An adenine auxotrophic mutant of *E. coli* showed inappropriate adenine use because its growth could not respond efficiently to the concn. of adenine added. As the presence of adenosine deaminase is well known in *E. coli* and it is thought to be involved in adenine use, a mutant disrupted adenosine deaminase gene (*add*) was constructed and tested. The mutant, which is deficient in *purF*, *purA*, *deoD*, *purR*, and *add* genes, and harboring the desensitized *purF* as a plasmid, accumulated about 1 g of inosine per L. Although we investigated the effects of *purR* disruption and *purF* gene improvement, unexpectedly an increase in the inosine productivity could not be found with this mutant.

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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harboring the desensitized purF as a plasmid, accumulated about 1 g of inosine per L. Although we investigated the effects of purR disruption and purF gene improvement, unexpectedly an increase in the inosine productivity could not be found with this mutant.

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L11 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1991:630517 HCAPLUS  
DOCUMENT NUMBER: 115:230517  
TITLE: 2',3'-Dideoxypurine nucleoside virucides microbial  
manufacture  
INVENTOR(S): Kojima, Eiji; Ishida, Shuji; Yoshioka, Hidetoshi;  
Murakami, Kunimutsu  
PATENT ASSIGNEE(S): Sanyo-Kokusaku Pulp Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
AB	JP 03047086	A2	19910228	JP 1989-181885	19890714 <--
	2',3'-Dideoxypurine <b>nucleosides</b> (Markush structure given) are manufd. from <b>purine</b> analogs (Markush structure given) and 2',3'-dideoxycytidine or 2',3'-dideoxyuridine or 3'-deoxythymidine in the presence of phosphates with an immobilized microorganism, e.g. Escherichia coli. The method can be used from com. prepn. of 2',3'-dideoxypurine nucleotides; the cost is low; the immobilized microorganism can be easily regenerated; and the products can be easily recovered. <b>E.</b> <b>coli</b> JA-300 was immobilized on .kappa.-carrageenan by a known method to obtain beads of immobilized <b>E. coli</b> JA-300. Prepn. of 2',3'-dideoxypurine <b>nucleosides</b> from 2'-3'-dideoxyuridine and various <b>purine</b> analogs using the immobilized <b>E. coli</b> JA-300 at 45.degree. with agitation was shown. The yield was 27-70%.				
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IT	<b>Fermentation</b> (dideoxypurine nucleosides, with immobilized microorganism as virucides at com. amt.)				

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L11 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1959:123119 HCAPLUS  
DOCUMENT NUMBER: 53:123119  
ORIGINAL REFERENCE NO.: 53:22204d-f  
TITLE: Permeability of Escherichia coli to ribose and ribose  
nucleotides  
AUTHOR(S): Eggleston, L. V.; Krebs, H. A.  
CORPORATE SOURCE: Univ. Oxford, UK  
SOURCE: Biochem. J. (1959), 73, 264-70  
DOCUMENT TYPE: Journal

LANGUAGE:

Unavailable

AB Washed intact cells of *E. coli* NCIB 8571, grown semi-anaerobically in a glucose medium, are able to degrade anaerobically D-ribose added in the form of **purine** and pyrimidine nucleotides or **nucleosides**. The products formed include CO<sub>2</sub>, H<sub>2</sub>, EtOH, AcOH, and succinic acid. Free ribose and ribose 5-phosphate are not degraded by intact cells grown in glucose medium, but are **fermented** by disintegrated cell material obtained by supersonic vibration. Intact cells grown in a medium contg. ribose instead of glucose rapidly **ferment** ribose and ribose 5-phosphate, as well as the ribose moiety of **purine** and pyrimidine nucleotides. Washed cells grown in a glucose medium acquire the ability to **ferment** ribose if they are incubated for a few hours in the presence of O<sub>2</sub>, ribose, and a source of N. The observations are in accord with the assumption that the penetration of ribose and ribose 5-phosphate into the cell is mediated by a specific permease. Washed cells also acquire the ability to **ferment** ribose 5-phosphate (but not ribose) when treated with cetyltrimethylammonium bromide or lysozyme plus ethylenediamine-tetraacetic acid. These agents presumably cause structural modifications in the cell wall.

SO Biochem. J. (1959), 73, 264-70

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